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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,810	11/13/2001	Debasis Majumdar	82857LMB	5670

7590 08/18/2005

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EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/008,810

Applicant(s)

MAJUMDAR ET AL.

Examiner

Katarzyna Wyrozewski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14,16,18-20,22-35,37-46,49 and 51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14,16,18-20,22-35,37-46,49 and 51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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In view of applicant's amendment, following office action is final. Applicant's arguments were considered but not found as persuasive. The rejections of record are incorporated here by reference.

The examiner would like to remind the applicant that limitation "for an imaging element" is a recitation of intended use. Therefore any composition that can be extruded is applicable against present claims.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 14, 16, 18-20, 22, 24-35, 37-46, 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over FISHER (US 6,579,927).

The discussion of the disclosure of the prior art of FISHER from paragraph 6 of the office action mailed on 2/2/2005 is incorporated here by reference.

3. Claims 14, 16, 18-20, 22-35, 37-27, 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over ACQUARULO (US 6,833,392) in view of FISHER (US 6,879,927).

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The discussion of the disclosure of the prior art of ACQUARULO and FISHER from paragraph 7 of the office action mailed on 2/2/2005 is incorporated here by reference.

4. Claims 14, 16, 18-35, 37-46, 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'NEIL (WO 01/034685).

The discussion of the disclosure of the prior art of O'NEIL from paragraph 8 of the office action mailed on 2/2/2005 is incorporated here by reference.

5. In the response filed on 5/2/2005 the applicants presented following arguments:

a) Intercalation of the polymer in the disclosure of ACQUARULO is not inherent characteristics.

With respect to the above argument, the examiner disagrees. The clay component of ACQUARULO is intercalated with ammonium cation, which in fact will inherently increase basal spacing between clay platelets. The prior art of ACQUARULO further discloses that the clay component has platy structure with high aspect ration. If the clay of ACQUARULO was not treated then it would be in form of an aggregate. Aggregates of clay are not considered nano-clays. In addition shear action such as that caused by extruder further ensures the delamination of clay platelets and intercalation of polymer between clay platelets.

b) ACQUARULO fails to teach clay intercalated with polyether/polyamide block copolymer.

With respect to the above argument, please see second experiment in col. 4.

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c) The prior art of ACQUARULO fails to teach clay intercalated with polyether/polyamide block copolymer to form extruded base for an imaging element.

With respect to the above argument, the examiner would like to remind the applicant that limitation of “for an imaging element” is a recitation of intended use. Composition that can be extruded will meet the claims.

d) FISHER does not teach clay component intercalated with polyether/polyamide block copolymer.

Such teaching is provided by the disclosure of ACQUARULO.

e) The structural units A and B of FISHER are not in copolymeric form with structural units A (col. 6, lines 61-66 of Fisher)

With respect to the above arguments, the prior art of FISHER teaches intercalation with block or graft copolymer. What is meant by the passage cited by the applicants is not that the structural units B do not form block copolymer with structural units A, but that their nature assures compatibility with polymeric matrix. In fact, the units B as further disclosed in col. 4 are polymeric components.

f) The polyamide and polyether blocks of the present invention are not either excellently mixable or of the same nature as the polymeric material.

The above argument is not commensurate with the scope of the claim. Even if it was, FISHER teaches additional matrix component such as polyolefin or polyester, that is definitely

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mixable with the block polymer such as PEBAX. In addition, the prior art of FISHER enables using ethylene oxide units as structural unit A (col. 3) and amides as a structural unit B (col. 4).

g) FISHER offers no expectation that intercalated clay may be used as an extruded base for imaging base.

See argument c above. Young's modulus is not commensurate with the scope of the claims.

h) The blends of the present invention are not expected to be miscible as shown in Exhibit A and B attached to the applicant's response.

Exhibit A, which the applicants supplied, discusses many different polymer blends, but does not really show the compatibility of the polymers in the present invention, i.e., polyester or polyolefin with polyether/polyamide blocks.

Exhibit B discusses compatibility of polyester with polyamide but with polyamide block copolymer containing polyether block.

Therefore the two exhibits supplied by the applicants are not persuasive.

i) At best the combination of ACQUARULO and FISHER would give clay intercalated with block copolymer with PEBAX as matrix.

On contrary, it is examiner's position that clay intercalated with PEBAX can be utilized in additional matrix polymer.

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The prior art of O'Neil is hereby withdrawn.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

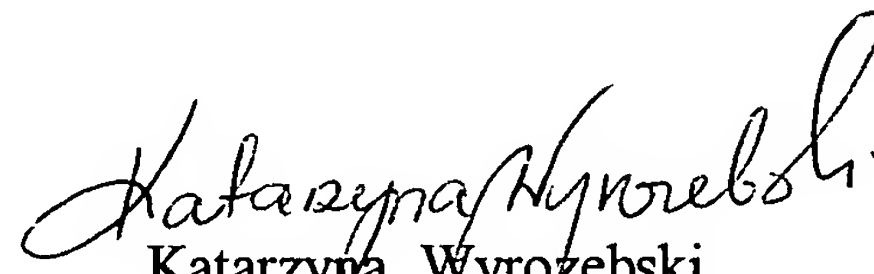
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski whose telephone number is (571) 272-1127. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Katarzyna Wyrozebski
Primary Examiner
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August 11, 2005